

REMARKS

The Applicant requests reconsideration of the rejection.

Claims 1-13 remain pending.

Claims 1-2 and 8 were rejected under 35 U.S.C. §112, second paragraph, as being indefinite for the reasons set forth on pages 2-3 of the Office Action. The claims have been amended to address the Examiner's concerns, the Applicant noting that the formerly-recited replication data results from copying the first file into the first duplicate-volume, and further noting that the backup recited in the preamble is the result of copying data as assumed by the Examiner. In general, the Applicant believes that the amendments to the claims satisfy any possible indefiniteness.

Claims 1-13 were rejected under 35 U.S.C. §103(a) as being unpatentable over VERITAS NetBackup DataCenter 4.5 ("Net Bkp") in view of VERITAS Volume Manager 3.2 ("VM 32"). The Applicant traverses as follows.

The present invention is directed to improvements in the technology of producing pair-volumes in copying a backup target file from an original volume to a duplicate volume. In the prior art, replication data acquired by copy, and the volume that stores the replication data, must be managed according to the attributes of the file, which is the target of the copy. However, the present invention permits the replication data and the volume storing the replication data to be flexibly managed according to the needs of the user (business), whereby the present invention classifies the data (files) into groups according to the user business, and performs the backup/restore operation in units defined by the groups.

As set forth in amended independent claim 1, for example, the program stored on the storage medium allows a computer to execute sequential procedures including holding a first table that stores each group name, file names, and each policy in a manner of being made to correspond to each other. Files representing backup objects or targets are classified into plural groups, each group corresponding to a respective user business. The Applicant refers the Examiner, by way of example, to the backup-target management table 109 (Fig. 3) in conjunction with this first table.

Claim 1 further recites the procedure of holding a second table for storing the file names, group names, and flags in a manner of being made to correspond to the duplicate-volume names (that is, the names of the destination (duplicate) volume), the flags indicating whether or not the duplicate volumes are available. By way of example, the Applicant refers the Examiner to the volume information table 108 (Fig. 6) in conjunction with this second table.

Further according to claim 1, when transmitting pair information to a storage apparatus in response to receipt of a specified first group name, the pair information including a first original-volume name (that is, the name of a source volume) and a first duplicate-volume name corresponding to the first original-volume name as a pair, storing the first file name of a first file stored in the first original-volume and the specified first group name into the second table in a manner of being made to correspond to the first duplicate-volume. Then, when transmitting the pair information to the storage apparatus in response to a receipt of a specified second

group name, the second group including the first file, the pair information including the first original-volume name and a second duplicate-volume name corresponding thereto, extracting the first duplicate-volume name out of the second table, and copying the first file into the first duplicate-volume.

Accordingly, although Net Bkp and VM 32 appear to disclose backup/restore operations in units of data or file, these documents neither disclose nor suggest the backup/restore in units defined by the user business according to group names, as required by the present claim 1. In this regard, the Applicant notes the Examiner's reference to pages 45-47 of Net Bkp as disclosing a backup group, but this passage simply shows that the same policy is applied to different files. Specifically, the policy described by Net Bkp defines a frequency of backup operation, a backup medium type, etc. as examples for which backup or restore can be classified, but there is no disclosure or suggestion that a user or administrator can specify a backup target according to a group or user business.

By this feature, as noted above, a user can specify a backup target by the group, as discussed on page 20, line 19 – page 21, line 4 of the present specification, for example. By specifying a group, all files belonging to the group are backed up. In other words, as set forth in the amended claims, by specifying the user business, all data corresponding to the user business can be backed up.

Independent method claim 2 has been amended in a similar way, requiring that files as back up objects be classified into plural groups each corresponding to a respective user business, wherein the first table is designed for storing file names in

a manner of being made to correspond to each group name, and the second table being designed for storing the file names and the group names in a manner of being made to correspond to the duplicate-volume names. According to the replication-data management method, when transmitting the pair information to the storage apparatus in response to the receipt of a specified first group name, the first file name of the first file stored in the first original-volume and the specified first group name are stored into the second table in a manner of being made to correspond to the first duplicate-volume name.

Independent claim 8 is directed to a computer, and has also been amended to require that files becoming backup targets are classified into plural groups, each corresponding to a respective user business. The first and second tables are recited similarly to claim 2. According to claim 8, the computer includes a volume setting unit for executing a step of, when transmitting the pair information to the storage apparatus in response to a receipt of a specified first group name, the first file name of the first file stored in the first original-volume and the specified first group name are stored into the second table in a manner of being made to correspond to the first duplicate-volume name. Therefore, claim 8 is also patentable.


Each of the dependent claims enhance the features of the independent claims discussed above, and thus each of the dependent claims are also possible. Their separate patentability will not be discussed further at this time, for brevity.

In view of the foregoing amendments and remarks, the Applicants request reconsideration of the rejection and allowance of the claims.

To the extent necessary, Applicant petitions for an extension of time under 37 CFR 1.136. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, or credit any overpayment of fees, to the deposit account of Mattingly, Stanger, Malur & Brundidge, P.C., Deposit Account No. 50-1417 (referencing attorney docket no. 500.43371X00).

Respectfully submitted,

MATTINGLY, STANGER, MALUR & BRUNDIDGE, P.C.



Daniel J. Stanger
Registration No. 32,846

DJS/sdb
(703) 684-1120